Catalog Description

The Electronics Technology program offers two-year degrees and one-year specialty certificates in the electronics field. The degree program is designed to provide the student with fundamentals of electricity and electronics, including digital electronics and microcomputers, specialized manufacturing electronics, industrial automation and electronic communications. The program also includes an Electronics Engineering Technology degree for transferring students. This program emphasizes a hands-on approach to learning through projects to reinforce the theoretical material. This degree program requires 64 credits in program requirements, program electives and general education in the courses listed below.

Program Requirements ..................................................27
Elect 1100 Electricity and Electronics Fundamentals ......3
Elect 1101* Circuits I.........................................................3
Elect 1102* Circuits II.........................................................4
Elect 1141 Digital Fundamentals .................................3
Elect 1151* Electronic Devices and Applications..........4
Elect 1161* Electronic Communication ........................4
Elect 2273* Embedded Systems and Microcontroller Programming .........................................................3
El mec 2510 Process and Automation Controls...........3

Program Electives............................................................19
Choose 19 credits from the following courses.
Elect 1120 Electronic Documentation ............................2
Elect 1201 Renewable Energy Fundamentals...............2
Elect 1221* Introduction to Biomedical Instrumentation Technology .........................................................3
Elect 1820 Selected Topics I............................................1 to 4
Elect 2001* Green Energy Systems ............................3
Elect 2221* Biomedical Instrumentation Technology and Applications.........................................................3
Elect 2860 Internship (Career & Technical Education) ..........................................................1 to 4
C it 1121 Introduction to Networks...............................3
El mec 1110 Motor and Generator Fundamentals ........3
El mec 1171 Introduction to Robotic Technology ..........3
El mec 1190 Introduction to Programmable Logic Controllers .........................................................3
El mec 1420 Drive Components ....................................2
El mec 2410* Programmable Controller II (PLC II) ......3
El mec 2600* Motion Control: Servo and Stepper Motor Application and Control ................................2
Hvacr 1100 Introduction to Controls ............................3
Manuf 1101 Industrial Design/CAD ...............................3

* - course has a prerequisite

Suggested Course Sequence
(Full Time Enrollment)

Please note: A student’s readiness to perform college-level coursework is based on the student’s placement test and/or ACT scores. Below 1000 level coursework may be required prior to the student taking courses in the suggested sequences.

First Semester (12 to 14 credits)
- Elect 1100 (3)
- Elect 1141 (3)
- General Education (3 to 5)
- General Education (3)

Second Semester (16 credits)
- Elect 1101 (3)
- Elect 1151 (4)
- Elect 2273 (3)
- Program Elective (3)
- Program Elective (3)

Summer Term (6 credits)
- General Education (3)
- General Education (3)

Third Semester (14 to 16 credits)
- Elect 1102 (4)
- Elect 2510 (3)
- Elect 1161 (4)
- General Education (3 to 5)

Fourth Semester (16 credits)
- Program Elective (3)
- General Education (3)
- Program Electives (3)
- Program Elective (3)
- Program Elective (4)

For more information:
If you are considering this program as an area of study, please contact the Business and Technology Division office at 630-942-2592.

Program web sites:
http://www.cod.edu/programs/electronics/electronics_technology/
Each candidate for an Associate in Applied Science (A.A.S.) degree shall satisfactorily complete a minimum of 18 credits in General Education. (In addition to the courses listed below.)

Under the specified General Education headings below, the following courses are required:

**Communication**: 6 credits  
**Written**: (3 credits) English 1101 or 1105  
**Oral**: (3 credits) Speech 1100, 1120 or 1150

**Physical and Life Sciences**: 3 to 5 credits  
At least one course with a laboratory component.

**Mathematics**: 3 to 5 credits  
Select a minimum of 3 credits (1000 level or above).  
Select Mathematics 1102, 1104 or 1120 only where required in the degree program. Only one from the following three courses may count toward overall degree requirement credit: Mathematics 1635, Psychology 2280 or Sociology 2205. Only one of the following courses may count toward overall degree credit: Mathematics 1428 or Mathematics 1431.

**Humanities and Fine Arts**: 3 credits

**Social and Behavioral Sciences**: 3 credits

Complete at least 2 credits from the list of courses in the Global/Multicultural Studies or Contemporary Life Skills Category.

| TOTAL CREDITS FOR AAS DEGREE | 64 |
Career Information  ELECT.AAS

Job Title(s): Electronics Engineering Technicians
Digital Tech (Digital Technician), Electrical Technician, Electronics Engineering
Technician, Electronics Technician, Engineering Technician (Engineering Tech), Failure
Analysis Technician (FA Technician), Refurbish Technician (Refurb Tech), Senior
Electronics Technician, Technician, Test Technician
For salary and wage information, please visit:  www.onetonline.org

If you would like information regarding internships, resume development, interviewing
and job search skills, please contact the Career Services Center
Phone:  630-942-2230
www.cod.edu/careerservices  Twitter:  @codcareercenter

Related Occupations:
Computer User Support Specialists  Broadcast Technicians
Electrical Engineering Technicians  Radio Mechanics
Mechanical Engineering Technicians  Computer, Automated Teller, and Office
Manufacturing Production Technicians  Machine Repairers
Electrical and Electronics Installers and  Avionics Technicians
Repairers, Transportation Equipment  Camera and Photographic Equipment
Repairers
Catalog Description

The Biomedical Engineering Technology degree prepares students for careers as biomedical equipment technicians, (also known as biomedical engineering technicians) in hospitals, health agencies, businesses and industries that manufacture and maintain electronic and biomedical instrumentation equipment. This program prepares students to test, install, and maintain healthcare components such as rehabilitation and therapeutic products, medical imaging systems, and computer-based systems used in the biomedical technology field. This degree requires 64 credits in program requirements, program electives and general education in the courses listed below.

Program Requirements .................................................33
Elect 1100 Electricity and Electronics Fundamentals ......3
Elect 1101* Circuits I.................................................3
Elect 1102* Circuits II................................................4
Elect 1141 Digital Fundamentals ...............................3
Elect 1151* Electronic Devices and Applications ..........3
Elect 1221* Introduction to Biomedical Instrumentation
Technology ..........................................................3
Elect 2221* Biomedical Instrumentation Technology
and Applications ..................................................3
Anat 1500* Survey of Human Anatomy and Physiology 4
Elmc 2510 Process and Automation Controls .............3
Hlths 1110 Biomedical Terminology ..........................3

Program Electives .......................................................13
Choose at least 13 credits from the following courses.
Elect 1120 Electronic Documentation ........................2
Elect 1161* Electronic Communications .....................4
Elect 1201 Renewable Energy Fundamentals ..............2
Elmc 1101 Survey of Automation ...............................3
Elmc 1141 Hydraulics and Pneumatics .......................3
Elmc 1190 Introduction to Programmable Logic
Controllers ...........................................................3

* - course has a prerequisite

General Education .....................................................18
Each candidate for an Associate in Applied Science (A.A.S.) degree shall satisfactorily complete a minimum of 18 credits in General Education. (In addition to the courses listed below.)

Under the specified General Education headings below, the following courses are required:

Written: (3 credits) English 1101 or 1105
Oral: (3 credits) Speech 1100, 1120 or 1150

Suggested Course Sequence
(Full Time Enrollment)

Please note: A student’s readiness to perform college-level coursework is based on the student's placement test and/or ACT scores. Below 1000 level coursework may be required prior to the student taking courses in the suggested sequences.

First Semester (13 to 15 credits)
• Elect 1100 (3)
• Elect 1141 (3)
• Anat 1500 (4)
• General Education (3 to 5)

Second Semester (12 credits)
• Elect 1101 (3)
• Elect 1221 (3)
• General Education (3)
• Program Elective (3)

Summer Term (3 credits)
• General Education (3)

Third Semester (17 to 19 credits)
• Elect 1102 (4)
• Elect 1151 (4)
• Hlths 1110 (3)
• General Education (3 to 5)
• General Education (3)

Fourth Semester (16 credits)
• Elect 2221 (3)
• Elmc 2510 (3)
• Program Elective (3)
• Program Elective (3)
• Program Elective (4)

For more information:
If you are considering this program as an area of study, please contact the Business and Technology Division office at 630-942-2592.

Program web site:
http://www.cod.edu/programs/electronics/electronics_technology/
Mathematics: 3 to 5 credits
Select a minimum of 3 credits (1000 level or above).
Select Mathematics 1102, 1104 or 1120 only where required in the degree program. Only one from the following three courses may count toward overall degree requirement credit: Mathematics 1635, Psychology 2280 or Sociology 2205. Only one of the following courses may count toward overall degree credit: Mathematics 1428 or Mathematics 1431.

Physical and Life Sciences: 3 to 5 credits
At least one course with a laboratory component.

Humanities and Fine Arts: 3 credits

Social and Behavioral Sciences: 3 credits

Complete at least 2 credits from the list of courses in the Global/Multicultural Studies or Contemporary Life Skills Category

TOTAL CREDITS FOR AAS DEGREE
64
Career Information ELECT.AAS.BIOMED

Job Title(s): Medical Equipment Repairers
Bio Medical Technician, Biomedical Electronics Technician, Biomedical Engineering Technician (BMET), Biomedical Equipment Technician (BMET), Biomed Tech (Biomedical Technician), Dental Equipment Technician, Electronic Technician, Repair Technician, Service Technician, X-ray Service Engineer

For salary and wage information, please visit: www.onetonline.org

If you would like information regarding internships, resume development, interviewing and job search skills, please contact the Career Services Center
Phone: 630-942-2230
www.cod.edu/careerservices
Twitter: @codcareercenter

Related Occupations:
Electrical Engineering Technicians
Manufacturing Production Technicians
Medical Appliance Technicians
Robotics Technicians
Mechanical Engineering Technicians
Electrical and Electronics Repairers, Commercial and Industrial Equipment
Catalog Description:

The Integrated Engineering Technology (InET) degree, a two-year program leading to an AAS degree, is designed to meet industry needs for multifunctional technicians competent in mechanics, computers, and electronics technology. This innovative program is an activity-based approach to learning where students work in teams. As InET engineering technicians, students may work individually or as members of a professional team, applying aspects of scientific and engineering concepts to the implementation of existing technologies and the creation of new technologies in the areas of administration, installations and maintenance of robotics and automated systems development, operation and maintenance. This degree requires 64 hours in program requirements, program electives and general education in the courses listed below.

Program Requirements ...........................................................51

- Elect 1100 Electricity and Electronics Fundamentals ......3
- Elect 1101 Circuits I .........................................................3
- Elect 1110 Introduction to Technology .........................2
- Elect 1120 Electronic Documentation ..........................2
- Elect 1141 Digital Fundamentals .................................3
- Elect 1151 Electronic Devices and Applications ..........4
- Elect 1201 Renewable Energy Fundamentals ............2
- Elect 2255 Industrial Controls .......................................3
- Elmec 1110 Motor and Generator Fundamentals ..........3
- Elmec 1171 Introduction to Robotic Technology ..........3
- Elmec 1190 Introduction to Programmable Logic Controllers ................................................3
- Elmec 1420 Drive Components ........................................2
- Elmec 2410 Programmable Controller II (PLC II) .......3
- Elmec 2600 Motion Control: Servo and Stepper Motor Application and Control ................................2
- Engli 1101 English Composition I .................................3
- Math 1115 Technical Mathematics I ..........................3
- Physi 1100 Physics .........................................................4
- Speec 1100 Fundamentals of Speech Communication ....3

Program Electives ...............................................................7

Select seven credits from the courses listed below.

- Elect 1102 Circuits II .....................................................4
- Elect 1161 Electronic Communications ......................4
- Elect 2001 Green Energy Systems .............................3
- Elect 2245 Programmable Logic Devices ................4
- Elect 2273 Embedded Systems and Microcontroller Programming ................................................3
- Elect 2860 Internship (Career & Technical Education) .........................1 to 4
- Elmec 1120 Residential Wiring ...................................3

Suggested Course Sequence

(Full-Time Enrollment)

Please note: A student’s readiness to perform college-level coursework is based on the student’s placement test and/or ACT scores. Below 1000 level coursework may be required prior to the student taking courses in the suggested sequences.

First Semester (16 credits)

- Elect 1100 (3)
- Elect 1110 (2)
- Elect 1141 (3)
- Elmec 1420 (2)
- Engli 1101 (3)
- Elmec 1110 (3)

Second Semester (14 credits)

- Elect 1101 (3)
- Elect 1120 (2)
- Elmec 1190 (3)
- Math 1115 (3)
- Speec 1100 (3)

Summer Term (7 credits)

- Physi 1100 (4)
- General Education (3)

Third Semester (14 credits)

- Elect 1201 (2)
- Elect 1151 (4)
- Elmec 2410 (3)
- Elmec 2600 (2)
- Elmec 1171 (3)

Fourth Semester (13 credits)

- Elect 2255 (3)
- Electives (7)
- General Education (3)

Summer Term

Internship (recommended)

For more information:

If you are considering this program as an area of study, please contact Business and Technology Division office at 630-942-2592.

8/21/17
Elmec 1130  Industrial Electricity........................................3
Elmec 1141  Hydraulics and Pneumatics ...............................3
Elmec 1150  National Electrical Code .....................................3
Manuf 1104  Technical Mechanics .......................................2
Weld  1100  Welding I ..........................................................3

* - course has a prerequisite

General Education .................................................................6 to 8
Each candidate for an Associate in Applied Science (A.A.S.) degree shall satisfactorily complete a minimum of 18 credits in General Education. (In addition to the courses listed below.)

For the Integrated Engineering Technology degree, some General Education courses are already listed under program requirements. Therefore, students only need 6 credits besides those listed under program requirements.

Under the specified General Education headings below, the following courses are required:

Communication: 6 credits
Written: (3 credits) English 1101 or 1105
(English 1101 in program requirements fulfills this requirement)
Oral: (3 credits) Speech 1100, 1120 or 1150
(Speech 1100 in program requirements fulfills this requirement)

Physical and Life Sciences: 3 to 5 credits
At least one course with a laboratory component
(Physics 1100 in program requirements fulfills this requirement)

Mathematics: 3 to 5 credits
Select a minimum of 3 credits (1000 level or above).
Select Mathematics 1102, 1104 or 1120 only where required in the degree program. Only one from the following three courses may count toward overall degree requirement credit: Mathematics 1635, Psychology 2280 or Sociology 2205. Only one of the following courses may count toward overall degree credit: Mathematics 1428 or Mathematics 1431.
(Mathematics 1115 in program requirements fulfills this requirement)

Humanities and Fine Arts: 3 credits

Social and Behavioral Sciences: 3 credits

Complete at least 2 credits from the list of courses in the Global/Multicultural Studies or Contemporary Life Skills Category.

<table>
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<tr>
<th>TOTAL CREDITS FOR AAS DEGREE</th>
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<tr>
<td>64</td>
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Career Information INET.AAS

Job Title(s): Engineering Technicians, Except Drafters, All Other
"All Other" titles represent occupations with a wide range of characteristics which do not fit into one of the detailed O*NET-SOC occupations. O*NET data is not available for this type of title.

For salary and wage information, please visit: www.onetonline.org

If you would like information regarding internships, resume development, interviewing and job search skills, please contact the Career Services Center

Phone: 630-942-2230

www.cod.edu/careerservices

Twitter: @codcareercenter

Related Occupations:

- Electrical Engineering Technologist
- Electromechanical Engineering technologist
- Electronics Engineering Technologist
- Manufacturing Engineering Technologist
- Mechanical Engineering Technologist
- Manufacturing Production Technician
- Non-Destructive Testing Specialist